SFA Modernization Program
United States Department of Education
Student Financial Assistance

Enterprise Application Integration (EAI) Core Release 3.0

Assessment and Requirements Matrix

Version 1.0

Task Order 80
Deliverable 80.1.1

February 1, 2002

Amendment History

DATE	DESCRIPTION	REFERENCE	APPROVALS / DATE
2/1/02	Initial Delivery		
2/22/02	Resubmitted		

Table of Contents

1 Introduction

The Enterprise Application Integration (EAI) Core Architecture provides a common data architecture platform to support the reengineering of the Modernization Program's business processes and associated application systems. As a strategic component of the Integrated Technical Architecture (ITA), it accelerates the change from the legacy systems towards SFA's Target State Vision.

The Release 3.0 EAI Core Architecture leverages Release 1.0 and Release 2.0 of the EAI Core Architecture that provide implementation of the EAI bus and connectivity to nine legacy systems and the Internet domain.

The Enterprise Application Integration (EAI) architecture addresses the Student Financial Assistance (SFA) Channel's need to access common data and business processes across disparate systems. The technical services provided by the EAI architecture supports Students, Schools, and Financial Partners by enabling the SFA systems to exchange information via common, reusable methods.

1.1 Document Purpose and Scope

The purpose of this document is to:

- Provide an assessment of the EAI Release 1.0 and 2.0 architectures
- Verify that EAI Release 3.0 goals will meet SFA application needs
- Define the architectural, functional, and technical requirements for EAI Release 3.0 services.

An assessment of the Release 1.0 and Release 2.0 of the EAI Core Architecture was performed to identify the strengths and improvement areas for the deployed architecture. This analysis provided a thorough review of all of the applications deployed with the EAI Core Architecture. This assessment built upon the Target Vision and Modernization Blueprint to define the specific set of architectural requirements for EAI Release 3.0. These requirements will be refined and prioritized based upon joint agreement between the Modernization Partner and SFA CIO.

1.2 Document Organization

This introduction and overview, Section 1, defines the purpose and scope of the document, describes the organization of the document, and provides a high-level summary of the document.

Section 2, EAI Support for SFA Business Functions, summarizes the overall SFA business functions supported by EAI, including those already implemented, in progress, and planned.

Section 3, Modernization Initiatives, documents the current set of initiatives and projects, and their requirements for EAI.

Section 4, Business Channel Priorities, defines the EAI priorities for each of the SFA business channels, Students, Schools, Financial Partners, and CFO.

Section 5, Assessment of EAI Release 1.0 and 2.0, provides a summary assessment of the EAI capabilities established by previous releases, and identifies any additional capabilities that are required.

Section 6, EAI Requirements, provides an overview of the requirements identified for EAI. The detailed requirements are enumerated in the referenced Requirements Matrix.

1.3 Summary Assessment

The Enterprise Application Integration (EAI) architecture is fundamental to the SFA modernization strategy. It enables modernization to progress and realize benefits incrementally without requiring completion of an enormous enterprise-wide re-engineering project. Individual components can be modernized one at a time and still function properly within the overall business context. This significantly reduces the risk associated with such a large undertaking by enabling effective incorporation of smaller components. It also allows the benefits of modernization to be realized sooner, albeit in an incremental fashion. Some have referred to this evolutionary approach to modernization as "build a little, test a little."

EAI also provides a capability that can be used to facilitate coordination of data across systems to improve consistency and reduce redundancy while the systems are being modernized. For example, transactions could be automatically generated to notify other systems when a student's address is updated. This provides the option of implementing an incremental improvement in data consistency while a larger data integration effort is underway.

EAI is developed and operated at the VDC. The majority of the traffic will be managed over VDC telecommunications links with no impact on the Department's internal network. The future positive Enterprise Impact to the Department, will be realized by sharing consistent data with the Department as more systems come on-line.

2 EAI Support for SFA Business Functions

Release 1.0 and Release 2.0 of the EAI Core Architecture built and validated Adapters for 9 existing SFA systems and the Internet domain. These have been connected to the EAI Bus that provides transformation and routing capabilities. In addition, the bTrade COTS product that provides secure communications with Schools has been connected to the EAI Bus.

This section describes the Business Function view of SFA EAI capabilities, in terms of the functions already installed, those that are in progress, and planned implementations.

2.1 Business Functions Installed

SFA Business Functions that are currently supported by EAI capability include:

- Direct Loan Exit Counseling
- Ombudsman Case Resolution
- Direct Loan Portfolio Analysis

These functions are currently operating in production.

2.1.1 Direct Loan Exit Counseling

The Direct Loan Exit Counseling function provides reliable, performance enhanced, NSLDS-based loan status information to Direct Loan holders during web-based exit counseling. The data are provided from NSLDS to DLSS as individual transactions in real-time.

2.1.2 Ombudsman Case Resolution

The Ombudsman Case Resolution function provides automation of the NSLDS-based loan information to Ombudsman caseworkers. The data are provided from NSLDS to OCTS as individual transactions in real-time.

2.1.3 Direct Loan Portfolio Analysis

Direct Loan transaction details and demographic data are provided to the Credit Management Data Mart (CMDM) to support Direct Loan portfolio analysis.

2.2 Business Functions In Progress

These business functions are currently being developed, and some of them have already started production.

2.2.1 School Eligibility Verification

PEPS provides data regarding School Eligibility currently to eCB supporting Campus Based, and is scheduled to provide School Eligibility data to COD when COD goes live. The data include eligibility for Title IV programs, Campus Based, Pell Grant, and Direct Loan. This function will be fully in production when COD goes live.

2.2.2 Student Eligibility Verification

Validates student eligibility for Direct Loan, Pell Grants, and Campus-Based awards. The Direct Loan and Pell data are provided to COD, the Campus-Based data are provided to eCB. This function will go into production with COD, scheduled for March 18, 2002.

2.2.3 Direct Loan and Pell Accounting

This capability posts financial and non-financial accounting events for Direct Loans and Pell Grants. COD provides the data to FMS. This function will go into production with COD, scheduled for March 18, 2002.

2.2.4 Direct Loan Tracking

COD provides loan Bookings to DLSS to record Direct Loans as soon as they are booked to enable repayment and deferment calculations. This function will go into production with COD, scheduled for March 18, 2002.

2.2.5 Promissory Note Information

Promissory Note Information, whether from the Imaging System or from the electronic Master Promissory Note web site is provided to COD in real-time. This function will go into production with COD, scheduled for March 18, 2002.

2.2.6 Pell Grant Notifications

COD provides NSLDS with notification of changes in status of Pell Grants each day. This function will go into production with COD, scheduled for March 18, 2002.

2.2.7 Originations and Disbursements

Disbursement requests from Schools for individual Pell Grants and Direct Loans are sent through SAIG to COD, either in the new Common Record format, or the current Direct Loan and Pell formats. This capability goes into production with COD, scheduled for March 18, 2002.

2.3 Additional Business Functions Planned

These business functions are preliminary. They have been identified during the assessment process, but are subject to refinement. Also, it has not yet been confirmed that they can all be implemented within the budget and schedule constraints of Core Release 3.0

2.3.1 Individual Authentication

An individual transaction request to the PIN Site provides identification data about a particular individual, including a Personal Identification Number. The PIN Site responds with an indication of whether or not that individual was authenticated. This is a proposed capability that is currently under discussion.

An EAI interface to this capability would provide a single standard method for non-web applications, like Interactive Voice Response Units, to authenticate individuals.

2.3.2 Student Address Update

Most SFA systems that deal with student data maintain address information for the students. This proposed business function would capture address updates from any one of multiple SFA systems, validate the update with the System Owner of the student address, and distribute the update to the other SFA systems that keep student addresses.

Eventually, the SFA data architecture may evolve to eliminate redundancy of student addresses, but until that time, this function would provide all subscribing SFA systems with the most current student address data available.

2.3.3 Campus Based Summary for FISAP

COD will summarize Campus Based results each year for each School, and provide that summary to eCB to pre-populate the appropriate fields on the FISAP. This saves schools from having to track and calculate the annual statistics themselves.

2.3.4 Direct Loan and Pell Status for an Individual Student

COD will provide current award status for an individual student for both Pell Grants and Direct Loans. This status transaction will be available to whichever SFA systems require the data. It is anticipated that the Consistent Answers initiative will be the first to make use of this capability.

2.3.5 FAFSA Status for an Individual Student

CPS will provide a status of the FAFSA for an Individual Student in response to a request. FAFSA on the Web will likely be the main user of this function.

2.3.6 Student Aid Record for an Individual Student

CPS provides the results for an individual student of its eligibility determination, including the Expected Family Contribution for need based aid. Again, FAFSA on the Web will likely be the main user of this capability.

2.3.7 Direct Loan Repayment Status for an Individual Student

DLSS provides the Direct Loan Repayment Status for an Individual Student in response to a query with the student identifier data. The Status includes current loan balance, payment history, and recent transactions.

2.3.8 Debt Collection Status for an Individual Student

DCMS provides the Debt Collection Status for an Individual Student in response to a query containing the Student's identifying data.

2.3.9 Campus Based Award Status for an Individual Student

The eCB system provides the award status for an individual student in response to a query containing identification data for a particular student.

2.3.10 Student Aid Financial History for an Individual Student

NSLDS provides a complete history of financial aid for an individual student in response to a query containing the identification data for a particular student.

2.3.11 Imaged Document Data

The Electronic Records Management system (ERM) provides data about documents that have been imaged. The data are provided either in response to a query containing document identifier, or published to applications that have indicated an interest in particular types of documents.

3 Modernization Initiatives

The Enterprise Application Integration (EAI) architecture is fundamental to the SFA modernization strategy. It enables modernization to progress and realize benefits incrementally without requiring completion of an enormous enterprise-wide re-engineering project. Individual components can be modernized one at a time and still function properly within the overall business context. This significantly reduces the risk associated such a large undertaking by enabling effective incorporation of smaller components. It also allows the benefits of modernization to be realized sooner, albeit in an incremental fashion. Some have referred to this evolutionary approach to modernization as "build a little, test a little."

The EAI team has reviewed the Modernization Blueprint, the Placemat of projects, and the current Modernization initiatives. Interviews and information gathering with the project teams has provided information about the current initiatives and their EAI requirements. Some of the initiatives have well defined requirements and have interface implementation in progress. Some of the other initiatives are in the formative stages and will require additional refinement of their interface requirements.

3.1 Consistent Answers

The Consistent Answers project is focused on providing more consistent service across all major customer interaction centers and through all media (Internet, automated voice response systems, Customer Service Representative (CSR), and paper based submissions). The EAI will allow access to multiple sources of data through a single access point providing consistent answers to all SFA customers (including students, schools, and lenders / guaranty agencies).

3.1.1 Purpose and Scope

The purpose of the Consistent Answers for Customers solution is to provide the ability for anyone within SFA or anyone representing SFA, to provide customers with accurate, complete and consistent answers, regardless of who is answering the question. This will be done by:

- Providing common views to the customer's contact history with SFA
- Common tools for the customer service staff
- Core views of the customer information
- Enhanced customer self-service

At the present, a holistic view of the customer is not available since data is collected in small portions through multiple transactions over different contact points and information about the customer is stored in multiple databases.

The current Consistent Answers for Customers solution includes four components:

- Contact Management and Core View for Schools
- Call Center Optimization
- Central IVR
- Common Contact Management Application for SFA

3.1.2 Release Schedule

Two releases of the current initiative are planned; the first release is scheduled for October 14, 2002. The second release will be complete the first of March 2003.

3.1.3 Key Contacts

Role	Name	E-Mail Address
Project Manager	Darrel W. Cravens	Darrel.W.Cravens@Accenture.com
Technical Architect	Stephanie Sadowski	Stephanie.D.Sadowski@Accenture.com
Interfaces Manager	TBD	TBD
Online Interface Lead	Mark Danzenbaker	Mark.A.Danzenbaker@Accenture.com

3.1.4 Interface Requirements

Consistent Answers will require interfaces with up to 9 other SFA systems:

- Common Origination and Disbursement (COD)
- Central Processing System (CPS)
- Direct Loan Consolidation System (DLCS)
- Direct Loan Servicing System (DLSS)
- The replacement for the Debt Management and Collection System (DMCS)
- National Student Loan Data System (NSLDS)
- Campus Based (eCB)
- Interactive Voice Response (IVR)
- Personal Identification Number (PIN) Site

The preliminary interface requirements are summarized in the following table.

System	Interface Type	Input	Output
COD	Transactional	Student SSN	Loan Status, Pell Status
CPS	Transactional	Student SSN	FAFSA Status, Current Institutions, Material Requests
DLCS	Transactional	Student SSN	Loan Status, Loan Holders
	Bulk Transfer	Student Change of Address	Acknowledgement
DLSS	Transactional	Student SSN	Balance, Payment History, Recent Transactions, Deferment Status, Payment Plan
	Bulk Transfer	Student Change of Address	Acknowledgement
DMCS Replacement	Transactional	Student SSN	Debt Collections
	Bulk Transfer	Student Change of Address	Acknowledgement
NSLDS	Transactional	Student SSN	Current Loan Holders, Contact Info, All Loan Balances

System	Interface Type	Input	Output
	Bulk Transfer	Student Change of Address	Acknowledgement
eCB	Transactional	Student SSN	Award Data
IVR	Transactional	Student Award Data	Student Identifier
PIN Site	Transactional	Student Identification	Authentication

It has not yet been determined which interfaces will be included in which releases.

3.1.5 New Adapter Requirements

Of the systems that Consistent Answers needs to connect, four do not yet have EAI Adapters installed:

- Direct Loan Consolidation System (DLCS)
- The replacement for the Debt Management and Collection System (DMCS)
- Interactive Voice Response (IVR)
- PIN Site

The software approach for the DMCS replacement has not yet been selected, so the Adapter approach will be determined after that selection. The two contenders are the LondonBridge commercial off the shelf product, and the DMCS replacement system developed by Raytheon.

The IVR system for Consistent Answers has also not yet been selected, so the Adapter approach will be determined after the selection. The ability to interface using MQSeries will be a factor in the selection.

3.2 Debt Management and Collection System Replacement

The DMCS System was developed approximately 13 years ago. This system is a major component of the FFEL System. The mainframe based FFEL system is co-owned by the Financial Partners Channel and the Students Channel. Specifically, Collections, a Students Channel business operation has the ultimate operational ownership of DMCS.

Functionally, DMCS provides for the processing of outstanding financial aid debts from the time a debt is assigned to Department of Education until it is paid-in-full or otherwise satisfied. Technically, DMCS is part of the FFEL legacy system and maintained by Raytheon Systems Corporation. The DMCS contract with Raytheon Systems expired September 30, 2001, and is currently running on two additional six-month options and one three-month option. Strategically, the changing business requirements demand that the DMCS legacy system be replaced with newer and better technologies. The imminent expiration of the current Raytheon Systems contract prompted the management decision to analyze the current situation and seek potential technological solutions to replace the DMCS System.

3.2.1 Purpose and Scope

The objective of the DMCS Replacement is to replace the current DMCS with a robust, modern and flexible Commercial-off-the-Shelf (COTS) package. This objective is in tandem with the retirement of the overall FFEL System.

The new solution will support SFA in its mission to lower unit costs, increase employee satisfaction, and increase customer satisfaction. The new technology will enable the speedy implementation of the collection strategies, reduction in manual and tape processing, automation in workflow, user-friendly applications and reporting capability, as well as the scalability in effective sharing of information with external and internal partners.

Overall, this initiative will enable Collections to capture the additional economic value of the defaulted loans, to enhance productivity, as well as accelerating the cash flow to U.S. Treasury.

3.2.2 Release Schedule

The initiative currently has the following milestones:

- Select COTS Package – February 4, 2002
- Complete Conference Room Pilot of selected solution – April 15, 2002
- Retire existing system – by December 31, 2002

The milestones beyond the Conference Room Pilot have not yet been defined.

3.2.3 Key Contacts

Role	Name	E-Mail Address
Project Manager	Red Feldman	Red.Feldman@Accenture.com
	Jim Menard	James.L.Menard@Accenture.com
Technical Architect	Terry Helwig	Terry.Helwig@Accenture.com
SFA System Owner	Gary Hopkins	Gary.Hopkins@ed.gov

3.2.4 Interface Requirements

DMCS Replacement will require interfaces with 3 other SFA systems:

- Direct Loan Servicing System (DLSS)
- National Student Loan Data System (NSLDS)
- Common Origination and Disbursement (COD)

The preliminary SFA interface requirements are summarized in the following table.

System	Interface Type	Input	Output
DLSS	Bulk Transfer	Loan Status	
NSLDS	Transactional	Student ID	Student Financial History
COD	Transactional	Student ID	Enrollment Status

In addition to SFA interfaces, the system interacts with many external systems. Private Collection Agencies and Guarantee Agencies currently have screen access to data, and may need some kind of automated interface.

The industry is starting to discuss standards for data interchange. SFA may want to build the capability to support such standard data interchange, but the technological approach has not yet been determined.

3.2.5 New Adapter Requirements

Adapters are already in place for DLSS, NSLDS, and COD. Significant configuration work may be required to implement the COD interface.

3.3 Electronic Campus Based (eCB)

The Student Financial Assistance (SFA) section within the U.S. Department of Education initiated the Institution or Campus Based (CB) Modernization project. The intent of the project is to modernize the existing CB application architecture; migrating from the current platform (COBOL, IBM Mainframe, VSAM data store) to a relational database platform (ORACLE), developing a web-based user interface (WebSphere), along with additional software functionality enhancements. This modernized solution is named eCB (electronic Campus Based).

The main objective of the modernization effort is to offer institutions and CB staff an integrated and intuitive solution that increases information access and self-service capabilities supporting SFA's goal of reduced unit cost, and improved customer and employee satisfaction.

3.3.1 Purpose and Scope

The project consists of five major development iterations that will generate the software required to meet the system requirements. Each iteration is composed of several modules using the Rational Unified Process development scheme. This approach is targeted at building and validating the most architecturally significant components first in an attempt to reduce risk associated with the target design and improve development efficiency by completing the most complicated functionality at the beginning of the project development cycle. Two product releases will be delivered during the eCB project – Release 1 has already been completed and Release 2 will be composed of the following iterations:

- Iteration 4: Admin Navigation, Accounting, Awards, Recalculation, FISAP View / Update, New School, Community Service Waivers, Title III Waivers, Underutilization Waivers, and PEPS Eligibility
- Iteration 5: Reallocation, Close Out (Awards), Hold Schools, Change Authorization Amounts, Admin Login / Security Table, Phone Log, Manual Adjustment, PART (IRS Skip tracing), PLIST, Data Processing / E-mail, Tracking, School Main Menu, Work-Colleges, Multi-Servicer Print, and Prior Year FISAP Processing

3.3.2 Release Schedule

The PEPS / eCB interface was released on 1 / 23 / 2002. Additional functionality to this interface and the FMS interfaces will be released on 3 / 15 / 2002.

3.3.3 Key Contacts

Role	Name	E-Mail Address
Project Manager	Kerry Trahan	Kerry.J.Trahan@accenture.com
Technical Architect	Jason Patton	Jason.M.Patton@accenture.com
Functional Design Lead	Kelly Sweet	Kelly.E.Sweet@accenture.com

3.3.4 Interface Requirements

eCB will require interfaces with 2 other SFA systems:

- Financial Management System (FMS)
- Postsecondary Education Participants System (PEPS)

The preliminary interface requirements are summarized in the following table.

System	Interface Type	Input	Output
PEPS	Bulk Transfer	Flat file	Flat file
FMS	Bulk Transfer	Flat file	Flat file
FMS	Bulk Transfer	Flat file	Data in a transition table

3.3.5 New Adapter Requirements

Adapters are already in place for PEPS and FMS. The FMS adapters may need customization to support the requirements.

3.4 Electronic Financial Statements and Compliance Audits (EFS)

Under authority of Section 487 of the Higher Education Act of 1965 (HEA), as amended, the Department of Education collects financial statements and compliance audits in paper form from 6,500 proprietary, non-profit and public institutions that participate in Title IV programs. This function encompasses two distinct review processes led by two groups within Student Financial Assistance Case Management and Oversight (SFA/CMO) – the Document Receipt and Control Center (DRCC) operated by 24 contractors, and regional Case Teams staffed with over 200 Federal employees.

Collecting, copying, screening, disseminating, reviewing and filing all these documents is an extremely awkward and time-consuming process. The tasks performed by the DRCC and Case Teams are labor intensive and involve constant document handling. Numerous manual data entry points create frequent data errors and slow a heavily resource-laden review process (See Attachment 1 for an illustrative overview of these processes). The large volume of incoming paper further overloads the review process. In Fiscal Year 2000 the DRCC processed over 13,500 documents --- 7,200 compliance audits and 6,300 financial statements. One of the most difficult challenges facing the DRCC and Case Teams is balancing their resources throughout the year to handle the workload at peak periods.

This backlog can prevent the Department from efficient and effective identification of institutions that are not compliant with the Title IV program. It also adversely affects the quality of services the Department delivers to its customers through lost documents, review mistakes, longer resolution periods, etc. In addition to these existing problems, SFA must allocate over 1200 square feet to physically store multiple years of audits and financial statements. Another driver in this initiative is the Government Paper Elimination Act (GPEA). It requires agencies to allow for electronic transactions, which applies to compliance audits and financial reports.

3.4.1 Purpose and Scope

The purpose of this initiative is to provide a paperless single point of receipt and access for financial statements and compliance audits by ensuring the following:

- Fully accessible, web-based application to replace current manual operations
- Electronic data capture to minimize errors, reduce paper, and eliminate lost documents
- Automated workflow tools to decrease backlogs, shorten cycle times, and balance resources
- Integrated business rules for improved decision-making throughout the review process
- User-friendly interfaces to reduce the manual data entry points and improve data access
- Data Store to eliminate duplicate data and immediately identify missing or late documents

This initiative will build off of the success of related applications that are in use at the Housing and Urban Development (HUD) Agency and the Securities and Exchange Commission (SEC). In concept, institutions would sign on through the Schools Portal and enter standard audit and financial data through a forms-based web application. They would attach an electronic version of their compliance audit and financial statement to the web form, such as a portable document format file. The institution's independent auditor may need to sign on to certify that the data submission is correct. In order to address related regulatory and attestation issues, we established a working relationship with Office of Management and Budget (OMB) and the American Institute of Certified Public Accountants (AICPA) in the development of this business case. This working group will be closely involved in setting the final requirements of the application during its development and deployment.

3.4.2 Release Schedule

The start and end dates for the major components of this initiative are:

- Detailed Design — May 2002 – July 2002
- Software Programming — July 2002 – October 2002
- Implementation — November 2002
- Production and Support — December 2002 – February 2003

3.4.3 Key Contacts

Role	Name	E-Mail Address
Project Manager	Gene Murphy	Gene.F.Murphy@Accenture.com
Technical Architect	TBD	TBD

SFA System Owner	Randy Wolff	randall.wolff@ed.gov

3.4.4 Interface Requirements

EFS will potentially require interfaces with the following SFA systems:

- Postsecondary Education Participants System (PEPS)
- Electronic Records Management (ERM)

The preliminary interface requirements are summarized in the following table.

System	Interface Type	Input	Output
PEPS	Transactional	Institution ID, Institution Data, Acknowledgement	Institution ID, Institution Data, Acknowledgement
ERM	Transactional	Document Identifier	Document, Document Data

3.4.5 New Adapter Requirements

Adapters are already in place for PEPS. New adapters will be required for ERM.

3.5 eServicing

Customers currently receive an inconsistent customer service experience. Direct Loan customers receive service through three mediums: the , VRUs, and CSRs who use text-based screens. A small group of CSRs use Graphical User Interface (GUI) screens. Each is supported by separate applications and technologies. Most information does not transfer between mediums causing duplicate efforts and inefficiencies for both the borrowers and the CSRs. Consequently, the customer's experience with the Direct Loan Service Centers is inconsistent.

Billing and payment options for the borrower are primarily paper-based. Borrowers who would like to use automated payments must sign up for the Electronic Debit Account (EDA) plan, locking in the payment date and bank account. Borrowers can view their account balances and amounts due on the Direct Loan site, but cannot view their detailed monthly bills or submit electronic payment via the . Mailing paper bills and receiving checks also causes time delays and increases manual workloads.

3.5.1 Purpose and Scope

The objective of eServicing is to enhance customer satisfaction, to reduce operating costs related to servicing Direct Loans, and to provide a foundation for an expandable Customer Relationship Management (eCRM) approach.

The main eServicing components include:

- Customer Relationship Management (eCRM)
- Internet Billing
- On-line Correspondence

Each of these components will provide significant customer satisfaction improvements and tangible cost savings. By integrating these three components, DLSS will provide a uniform and high-quality customer service experience for our borrowers regardless of how they choose to interact with DLSS – via the Internet, the VRU, or Customer Service Representatives (CSRs).

The eServicing solution will provide a scalable platform that accommodates the growing portfolio, using commercial-off-the-shelf (COTS) software and industry best practices. The solution will be modular and will allow for advances in technology such as voice over the

3.5.2 Release Schedule

This initiative is scheduled to go into production April 1, 2002.

3.5.3 Key Contacts

Role	Name	E-Mail Address
Project Manager	Kerry Trahan	kerry.j.trahan@accenture.com
Technical Architect	John Coleman	john.f.coleman@accenture.com
SFA Business Owner	Dan Hayward	dan.hayward@ed.gov

3.5.4 Interface Requirements

This initiative will require interfaces with 1 other SFA system, the Direct Loan Servicing System (DLSS).

The preliminary interface requirements are summarized in the following table.

System	Interface Type	Input	Output
DLSS	Transactional	TBD	TBD
DLSS	Bulk Transfer	TBD	TBD

3.5.5 New Adapter Requirements

New adapters will be required for eServicing and DLSS.

3.6 FARS Retirement

FARS is the accounting and partial reporting system for servicing. The accounting component of FARS is being replaced by the Financial Management System (FMS). There are other functions that FARS performs today that FMS will not perform in the future. The FARS Retirement project will provide a solution for such functions and thus help retire the FARS mainframe. A data mart called "Credit Management Data Mart" (CMDM) is being created to support these requirements and to receive monthly demographic data from DLSS.

3.6.1 Purpose and Scope

Provide the functions currently performed by FARS that will not be provided by FMS.

3.6.2 Release Schedule

The dates for the major components of this initiative are:

- Production Demographic files transfers from DLSS to CMDM February 15, 2002
- Production Transaction files transfers from FMS to CMDM March 2002

3.6.3 Key Contacts

Role	Name	E-Mail Address
Project Manager	Gray Griffith	Mary-Gray.Griffith@accenture.com
Technical Architect	Madhu Shantharaj	mshantharaj@kpmg.com
Technical Architecture POC	Brad Wilson	bradleyawilson@kpmg.com
SFA Business Owner	Sybil Phillips	sybil.phillips@ed.gov
System Security Officer	Schonda Piper	schonda.piper@ed.gov

3.6.4 Interface Requirements

FARS Retirement will require interfaces with 2 other SFA systems:

- Financial Management System (FMS)
- Direct Loan Servicing System (DLSS)

The preliminary interface requirements are summarized in the following table.

System	Interface Type	Input	Output
DLSS	Bulk Transfer	Loans file	Loans file
DLSS	Bulk Transfer	Borrowers file	Borrowers file
DLSS	Bulk Transfer	FICE school codes file	FICE school codes file
CMDM to DLSS	Bulk Transfer	Loans mega record file	Loans mega record file
FMS	Bulk Transfer	IF010 file	IF010 file
FMS	Bulk Transfer	IF020 file	IF020 file
FMS	Bulk Transfer	G-Record file	G-Record file
FMS	Bulk Transfer	Manual Transactions file	Manual Transactions file

3.6.5 New Adapter Requirements

Adapters are already in place for DLSS and FMS. The adapters must be configured to support the requirements.

3.7 Financial Partners DataMart

The Financial Partners Channel is responsible for both current and retired loan programs and as such is under customer and program obligation to ensure the capture and comparative ability of all programs. By collecting information from several sources into a central location, personnel in the Channel as well as external partners will be able to more efficiently identify areas in which each party may assist the other while improving the support for students within the Federal Family Education Loan Program.

3.7.1 Purpose and Scope

The purpose of the complete Data Mart initiative is to provide executive/summary information and decision support capabilities around several key business functions that include Risk Management, Customer Relationship Management, Compliance Management, and Portfolio Management.

3.7.2 Release Schedule

05/20/2002 – FPDM R2 go-live

The dates for the major components of this initiative are:

- Development February 18, 2002 to February 28, 2002
- Testing March 01, 2002 to May 17, 2002
- Production May 20, 2002

3.7.3 Key Contacts

Role	Name	E-Mail Address
Project Manager	Nancy Krecklow	Nancy.A.Krecklow@Accenture.com
Technical Architect	Ahmad Usmani	Ahmad.Z.Usmani@Accenture.com
SFA System Owner	Anna Allen	Anna.Allen@ed.gov
SFA Security Officer	Willie Sutton	Willie.Sutton@ed.gov
System Administrator	Rich Ryan	rryan2@csc.com

3.7.4 Interface Requirements

FP DataMart Retirement will require interfaces with 3 other SFA systems:

- Financial Management System (FMS)
- National Student Loan Data System (NSLDS)
- Postsecondary Education Participants System (PEPS)

To support the loading of the data, the EAI Bus will also interface with the following servers:

- Informatica
- MicroStrategy

The preliminary interface requirements are summarized in the following table.

System	Interface Type	Input	Output
FMS	Transactional	TBD	TBD
NSLDS	Bulk Transfer	TBD	TBD
PEPS	Bulk Transfer	TBD	TBD

3.7.5 New Adapter Requirements

Adapters are already in place for FMS, NSLDS, and PEPS. The FMS adapter may need to be modified to meet requirements. The NSLDS and PEPS adapters will need to be configured to meet requirements.

3.8 FMS Phase IV

The Higher Education Act as Amended in 1998 created a Performance Based Organization (PBO) for the Office of Student Financial Assistance (SFA) within the Department of Education (ED). This legislation provided SFA with the authority to be responsible for a financial management system to support its program and administration funds. Unlike best of business organizations, SFA currently does not have an integrated financial management system from which it can provide timely, accurate financial information about all its program obligations, commitments and expenditures to its managers and employees and outside stakeholders. One of the three interim objectives of SFA is to reduce the overall cost of delivering student aid. An indicator of success and a necessary method of measuring this objective is the design of a subsidiary-style financial management system that supports SFA

3.8.1 Purpose and Scope

Phase IV for SFA FMS encompasses an integrated design incorporating information and processes from a number of SFA reengineered subsystems (e.g. Common Origination and Disbursement [COD], Campus Based Programs, Lender Payments, etc.) and SFA operations.

One of the primary objectives of Phase IV is to develop and deploy the necessary interfaces and extensions to SFA FMS in order to be fully operational with other SFA systems that are undergoing transformation. These include the COD, Campus-based systems, Lender Payments and Debt Collection Services initiatives. The enhancement of the use of the Accounts Receivable module will be required in order to accomplish that objective. Further, in order to modernize the funding process, Phase IV includes the development and deployment of a web-based SFA funding request portal.

Phase IV will yield an SFA FMS system in a state that is fully integrated with the program systems, including the reengineered source systems, as well as with the Department core financial systems. Phase IV is much more dependent than the earlier phases on other IPT initiatives as well as entities

external to SFA. As such, we have divided Phase IV into multiple sub-phases and releases, and incorporated some of the information available regarding these other reengineering systems projects into the scope. Based upon the information we have available at this time, the following summarizes the anticipated scope areas for the Phase IV releases:

3.8.2 Release Schedule

Phase IV of FMS is configured in multiple releases.

- Phase IV Release 1 -- December 2001
  - Interface with new Campus Based programs system
- Phase IV Release 2 -- February 2002
  - Integration and interfaces with Common Origination and Disbursement (COD)
  - Incorporation of the COD / FMS interfaces into SFA's Enterprise Architecture Integration (EAI) framework
  - Enhanced use of the Accounts Receivable module and coordinated interaction with the ED Accounts Receivable office as a service provider to SFA
  - Modifications to interfaces with Direct Loan systems (in particular, DLSS and the new Credit Management Data Mart)
- Phase IV Release 3 -- April 2002
  - Coordination with Lender Payments re-engineering IPT extension and interface (this is included under Task Order 73)
- Phase IV Release 4 -- June 2002
  - SFA / Title IV Web-based Drawdown and Award processes, and associated modified interactions with ED GAPS
- Phase IV Release 5 -- August 2002
  - Modification to the Debt Collection Services interface solution (from Phase III interim solution) based on the anticipated re-engineering or replacement of the Debt Management and Collection System (DMCS) (note: this timing is projected based on the DMCS retirement business case).
- Unscheduled release date(s)
  - Addition of SFA salaries and expenses operational transactions to SFA FMS
  - Implementation of a contracts management system to integrate with SFA FMS
  - Enhanced coordination and integration with ED Budget Services
  - Enhancements to the SFA FMS reporting environment, including reports to be developed and added to the FMS application menu structure as well as reports and queries to be developed using Oracle Discoverer

3.8.3 Key Contacts

Role	Name	E-Mail Address
Project Manager	Todd Elliot	todd.b.elliot@accenture.com
Technical Architect	Jeff Ross	jeffrey.n.ross@accenture.com

Role	Name	E-Mail Address
Interfaces Manager	Joe Fletcher	jfletcher@kpmg.com

3.8.4 Interface Requirements

FMS will require interfaces with 3 other SFA systems:

- Common Origination and Disbursement (COD)
- Electronic Campus Based System (eCB)
- Financial Partners DataMart (FP DataMart)

The preliminary interface requirements are summarized in the following table.

System	Interface Type	Input	Output
COD	Transactional	Financial, Financial Responses, Institution	Financial, Financial Responses
eCB	Bulk Transfer, Transactional	Unpaid Teacher Cancellation Liabilities	-
FP DataMart	Transactional	TBD	TBD

3.8.5 New Adapter Requirements

There are adapters in place for COD and eCB. For any additional transactional interfaces, the FMS adapter may need to be customized to support those requirements.

3.9 Redesign of FAFSA on the Web

The redesign of the FAFSA on the Web (FOTW), an application used by college students and schools to submit financial applications via the Internet, will increase usability, accuracy, efficiency, security, and scalability. The architecture of FOTW Version 6.0 will migrate from a three-tiered architecture to an N-tier architecture where business and presentation logic are separated into different tiers, thus alleviating redundancy between the applications and increasing integration between new and legacy systems. Version 6.0 plans to utilize a product known as Shadow Direct for its functionality.

3.9.1 Purpose and Scope

MQSeries products and the EAI architecture will enable integration of legacy system functionality with FOTW Version 7.0, allowing these systems to be upgraded for increased supportability and scalability. EAI will also enable the FOTW application to display results from the Central Processing System (CPS) in real-time. Other benefits of the new version of FOTW will be:

- Elimination of the Shadow Direct project from the overall architecture. SFA already has purchased MQSeries products and following Version 7.0 of FOTW, they will be able to discontinue the utilization of Shadow Direct.
- Adherence to agreed upon and published Integrated Technical Architecture (ITA) standards. The ITA supports the use of MQSeries products, not Shadow Direct.

3.9.2 Release Schedule

The release schedule for FOTW 7.0 has not been established yet. Because the rules governing the FAFSA form change every year, a release date of January 1, 2003 is assumed.

3.9.3 Key Contacts

Role	Name	E-Mail Address
Project Manager	Chris Paladino	Chris.D.Paladino@Accenture.com
Technical Architect	Jose Alvarez	Jose.J.Alvarez@Accenture.com

3.9.4 Interface Requirements

FAFSA on the Web will need an interface with the CPS system.

The preliminary interface requirements are summarized in the following table.

System	Interface Type	Input	Output
CPS	Transactional	Student Identifier	Student Aid Report, Status
CPS	Transactional	FAFSA Data Input	Receipt Confirmation

3.9.5 New Adapter Requirements

Adapters are already in place for DLSS and FMS. The FMS adapters may need customization to support the requirements

3.10 SFA Portals Release 1.0 and Release 2.0

SFA's Internet channel has more than 35 web sites connected to multiple back-end systems. The SFA websites do not provide for a unifying theme or a consistent common look and feel across all sites. Students and Financial Partners do not have one single entrance point to access SFA's Internet services; they must access multiple URLs to retrieve financial aid information. SFA web sites need a personalized starting point for Students and Financial Partners to enter through one "front door" to access a single view of internally and externally stored content/information, application/services, business processes, and knowledge assets for every channel.

3.10.1 Purpose and Scope

The SFA Students and Financial Partners channels portals will bring together, in one simple, personalized Web page all the information and productivity tools relevant to SFA's customers, employees, and partners to make informed financial aid decisions and empower financial partners to assist students. The personalized "front door" will automatically identify and distribute content relevant to each user. The portals will integrate with existing SFA web sites (e.g., FAFSA, NSLDS, DLSS, etc..), and external sites (ELM Net, Meteor, etc..), using the ITA infrastructure. The portals

will be the glue that bonds all of SFA's web services together providing a uniform starting point for students and financial partners to access SFA.

The scope of this initiative presents SFA with the framework for building a unified portal for students, parents, and financial partners to access SFA Financial Aid information. Release 1 includes the design of the enterprise portal framework with channel specific views for students and financial partners, the gathering of detailed requirements for both the students and financial partners channel specific views. Release 1 will also include the development of the SFA enterprise portal with channel specific views for both Students and Financial Partners to be deployed upon successful testing and approval. It will also be flexible to address the changing business environment needs of SFA. The end result of this project will be a long-term business architecture strategy for the SFA Enterprise Portal. Release 2 will include enhanced student services and integration with the financial partners data mart self-audit capability and the lender payment process. This phase will also include the development of an adoption plan for students and financial partners.

3.10.2 Release Schedule

SFA Portal Release 1.0 is scheduled to go live April 30, 2002

SFA Portal Release 2.0 is scheduled to go live September 30, 2002

3.10.3 Key Contacts

Role	Name	E-Mail Address
Project Manager	Jacqueline Dufort	Jacqueline.A.Dufort@accenture.com
Technical Architect	Matthew Wilson	Matthew.B.Wilson@accenture.com

3.10.4 Interface Requirements

SFA Portal Release 1.0 will not require any EAI interfaces. Release 2.0 will require an interface (type is TBD) with the PEPS system and historical interest rate data (system is TBD)

The preliminary interface requirements are summarized in the following table.

System	Interface Type	Input	Output
PEPS	TBD	TBD	TBD
TBD	Bulk Transfer	Date / date range	Historical interest rates

3.10.5 New Adapter Requirements

Batch adapters are already in place for PEPS, but any transactional adapters will need to be developed. New adapters may be needed for the historical interest rates depending on the system that owns the information.

3.11 Ombudsman System

The Ombudsman's newly developed Siebel system has already been added to the EAI architecture during this period. This system, which is designed to track borrower complaints, is linked to the National Student Loan Database System (NSLDS). The Ombudsman system provides borrower social security numbers to NSLDS and in return receives information regarding all loans disbursed to that borrower.

System	Interface Type	Input	Output
NSLDS	Transactional	Student Identifier (SSN)	Loan Data

3.12 Single Sign On

The Single Sign On (SSO) initiative is still in the Requirements phase, so specific interface requirements have not yet been defined. It is recognized by both the SSO and EAI teams that implementation of an SSO solution requires the sharing of user data across systems, a function that EAI can readily support. The SSO team will ensure that their solution does not duplicate existing or planned EAI capability.

3.13 Consistent Data

The Consistent Data initiative has mapped the high-level data entities shared across SFA systems to the system that should be the owner of each entity, and the systems that make use of that data entity. This provides the EAI team with a roadmap for implementing SFA business functions, and will be used to identify additional cross-application business functions that may be implemented in Release 3.0 of EAI Core.

4 Business Channel Priorities

This preliminary assessment of Channel priorities for EAI will be reviewed and refined throughout the course of the endeavor.

4.1 Students Channel

Discussions with Jeanne Saunders indicate that the two top priorities for Application Processing are moving FAFSA on the Web onto the EAI bus, and making CPS more interactive. A more interactive CPS requires more interactive responses from the other SFA Systems CPS depends on, such as NSLDS. In the longer term, Modernization may need to look into the external interfaces with other agencies such as SSA, DOJ, INS, etc.

4.2 Schools Channel

The highest priority for the Schools Channel is the successful implementation of Common Origination and Disbursement.

The Schools Channel helps school partners award and deliver aid. The core processes are aid origination and disbursement, program eligibility, program support and financial processes.

4.3 CFO

The highest modernization priority for SFA CFO is the continued implementation of a Financial Management System

4.4 CIO

A high priority for SFA CIO is demonstrating that EAI capability is providing true business value to the Enterprise. In addition, CIO has the objective to help SFA reduce overall unit costs.

5 Assessment of EAI Release 1.0 and 2.0

Previous EAI Releases laid the foundation necessary to enable SFA Applications with the EAI Architecture. The development environment was rolled out with all EAI software necessary to enable applications to use the EAI Bus. EAI Release 3.0 will build on this foundation by increasing the capacity of the EAI Bus and usage of MQSI and MQSeries Workflow.

5.1 Development Environment and Migration Management

MQSI Development

The MQSI Development Architecture for SFA consists of multiple hardware and software components. Within this development environment, there is an MQSI NT development server that houses the Configuration Database and a broker for validating developed message flows. A server is used for the **MQSI configuration management** process and three workstations are used for the **MQSI Control Centers**.

The **MQSI configuration manager** serves three main functions:

- It maintains configuration details in the configuration repository. This is a set of database tables that provide a central record of the broker domain components.
- It manages the initialization and deployment of brokers and message processing operations in response to actions initiated through the Control Center. It communicates with other components in the broker domain using MQSeries transport services.
- It checks the authority of defined user IDs to initiate those actions.

The **MQSI control center** has two main functions:

- The creation, manipulation, and deployment of configuration data for a broker domain.
- The monitoring and management of the operational state of the same broker domain.

Operating Systems

The MQSI Broker components are installed and configured on two Sun Solaris systems and the NT MQSI build time server. The MQSI Configuration Manager component and a broker are installed and configured on a single Windows NT system. The MQSI Control Centers are installed and configured on three Windows NT workstations.

Development Tools

The development tools that were used to develop the Release 1 and 2 EAI Core Architecture components included the MQSeries Integrator Control Center, the MQSeries commands and system specific compilers for the custom adapters. For the NSLDS system, the Cool:Gen tool was used to build the custom adapters used for the NSLDS CICS transaction environment. Deliverable 54.1.5 EAI Build and Test Report (Release 1) and 54.1.8 Build and Test Report (Release 2) include the specifics of the custom adapters built and the tools used to build them.

The MQSeries Integrator Control Center was used to build the Release 1 and 2 EAI Core Architecture message flows and message sets. The Control Center was installed and configured without any customization.

The MQSeries commands and control commands were used to build the EAI Core Architecture Release 1 and 2 MQSeries objects and to start MQSeries specific processes. The command sets are provided as part of the base MQSeries software product.

Migration Procedures

MQSI Migration

MQSI configuration and message flows will be migrated from the Development MQSI Configuration Manager to the Production MQSI Configuration Manager, then deployed to the Production environment from the Production MQSI Configuration Manager. A VDC technician will then execute the Production migration.

MQSeries Configuration Migration

All MQSeries configuration scripts will be checked into the version control system ClearCase. Those configuration scripts will be extracted from ClearCase and run in the EAI Staging environment. When the configuration is validated, it will be moved from Staging to Production by a VDC technician.

Data Integrator Configuration Migration

All Data Integrator configuration scripts will be checked into the version control system ClearCase. Those configuration scripts will be extracted from ClearCase and run in the EAI Staging environment. When the configuration is validated, it will be moved from Staging to Production by a VDC technician.

Custom Adapter Migration

All custom adapter source code will be checked into the version control system ClearCase. The code will be extracted from ClearCase and built in the EAI Staging environment. When the adapters are validated, they will be moved from Staging to Production by a VDC technician.

Access Conventions

Developers seeking access to the EAI development environment must first complete two steps:

- Complete the security packet in order to obtain an SFA Sensitive Security clearance.
- Complete the SFA User ID Request form indicating the system to which access is needed and the type of access desired (a separate copy of the form is required for each system). The appropriate System Security Officer will review this form.

The User ID Request form cannot be submitted until the security packet has been accepted and is in process, normally a week. Once both requests have been granted, the team member will be issued an ID and given access.

5.2 Updated Standards and Conventions

A naming convention for all MQSeries Integrator components in the SFA EAI architecture has been developed to ensure that all names are unique and that users have clear guidance as to how to name new objects. These naming conventions will be incorporated in the EAI Enablement Guide.

5.3 Increased Capacity in Production Queues

Disk space will be increased to accommodate the expected needs of all Applications going live on the EAI Bus during EAI Core R3. This includes a total of 120 GB of disk space for MQSeries queues and data directory space for MQ messages, Data Integrator file transfers, and data transformation processing. The MQSeries queue space will allow up to 30GB of message data to be queued on each server and the data directory space will allow up to 30GB of data to be stored to disk on each server.

5.4 Increased Utilization of MQ Capabilities

EAI Release 3.0 will see increased usage of MQSI for both message transformation and message flows as more Applications begin to use the EAI Bus. EAI Release 3.0 will also evaluate the capabilities of MQSeries Workflow and add it to the suite of tools available to Application teams.

6 EAI Requirements

EAI also provides a capability that can be used to facilitate coordination of data across systems to improve consistency and reduce redundancy while the systems are being modernized. For example, transactions could be automatically generated to notify other systems when a student's address is updated. This provides the option of implementing an incremental improvement in data consistency while a larger data integration effort is underway.

The EAI architecture is a strategic component of the overall SFA Enterprise Architecture and is comprised of the technical services necessary to provide a reusable integration platform and promote data sharing across the disparate systems within SFA. The core EAI Architecture provides the foundation for SFA to move towards its Integrated Technical Architecture.

6.1 EAI - Software

The following software is needed to meet the requirements of this task order:

- MQSI Performance Analysis Tool
- 100+ MB Transfer Tool
- Other Software (i.e. COTS adapters)

6.2 EAI - Monthly Workshop

Implementation of EAI technology is an enterprise-wide initiative involving not only the EAI team, but also the application teams using the services of the EAI bus. The EAI team's activities need to be coordinated across all impacted stakeholders. Effective communication of EAI accomplishments, capabilities and services is a critical component of successful EAI integration. To facilitate communication the EAI Core team will conduct six workshops over the duration of Task Order 80. Each workshop will provide a different target audience with information they need regarding EAI.

Target audiences include:

- operating partners and their technical representatives
- application teams
- broader ModPartner community.

6.3 EAI - Core Adapters

Core adapters are custom software solutions that provide communication between two or more disparate systems. Core adapters will allow legacy systems and modernization applications to interface with the SFA architecture, providing inter-system communication of disparate SFA legacy systems in an efficient and reusable manner. Additional adapters (e.g. Data Integrator, Informatica, SSO, etc.) are required to complete the EAI core architecture.

The following core adapters will be built in EAI Release 3.0 to support FY02 Modernization applications:

- PIN Site
- Oracle Financials Modules (Accounts Payable, Accounts Receivable, Fixed Asset, Federal Administration)
- DMCS Replacement

- Single Sign On
- Siebel
- Informatica

6.4 EAI - Common Services Management/Component Library

Integrate, manage, and maintain a library of EAI based business functions to maximize business channel benefit and reusability. Also provides services to ensure application teams maximize the benefits provided by the EAI business functions.

- Reusable EAI components will include Common School, Common Student, Lender-Guarantor and Reusable Function (i.e. Update Student Address) containers. Other components will be developed as application requirements are defined. The design of the components will be built to support reuse across business channels.
- There will be a centralized component library.

6.5 EAI – Core Services

Core Services includes architecture, upgrades, and reusable practices.

6.5.1 Architecture

Provide implementation of the additional core EAI architecture and services including MQSeries Messaging, MQSeries Integrator, and Data Integrator for both the performance testing and staging environments. Performance monitoring and analysis capabilities of the EAI architecture will also be added. This task will implement the following additional architecture for the EAI environments.

- XML Parser Capability
- Metadata Repository Instance
- 100+ MB Transfer Capability

6.5.2 EAI – Upgrades

Upgrade EAI software packages, software patches, and operating systems to more current versions for the development and test/stage environments. As vendors drop support of older versions of the software, the EAI team must ensure the manufacturer supports the product suite. Upgrading to the most current versions will ensure quality and availability of continued technical support. New software versions will eliminate defects and improve the robustness of the software. Software enhancements will be made available that can be used to provide new capabilities. The following upgrades will be made:

- Operating System to Solaris 2.8
- DLSS v2.2.1.1 to v5.x (Product support being terminated, as stated by IBM website.)
- Data Integrator patch to allow it to write files larger than 2GB on Sun Solaris machines
- Data Integrator upgrade to make it compatible with MQSeries v5.x on OpenVMS

6.5.3 EAI - Reusable Practices

Documentation outlining the guidelines to perform monitoring and troubleshooting of the EAI environments will be developed. A set of industry accepted best practices and technical standards that will address how to design, build, and efficiently test software. Implementation of best practices and standards will ensure consistent software development across the project. Developers do not have to individually research best practices and standards. The research is done once and rolled out to each developer. This will also help to speed up development time and the learning curve.

- Reusable practices will include naming standards and programming standards.

6.6 EAI – Development Integration Services

Continued support and expansion of the EAI Architecture to enhance the standardized, reusable architecture for integrating the business capabilities and data of the disparate SFA systems. EAI technical resources will provide:

- Business Capability Architecture support
- Technical Integration Support
- Strategic Planning for Single Set of Stored Data Solution
- Interface development SME support
- Application interface testing support
- Business Focused Sequence Planning (i.e. Release Planning) for EAI Solution Rollout
- Interface deployment support